

REMARKS

By the present Amendment, a minor revision has been made in the specification so that the viscosity is consistent with the descriptions provided in the first full paragraph on page 24 and the last paragraph on page 25. In addition, claims 25 has been amended to include the subject matter of former claims 26 and 27 and to recite a molecular weight range supported by the description at least in the last paragraph of page 7. Furthermore, claims 26-30 have been canceled without prejudice or disclaimer and new claims 31-34 with claim 31 also being supported by the description in the last paragraph on page 7, claims 32 and 33 being supported by the passages on pages 19, 24 and 25, and claim 34 which is similar to claim 25, but which recites the presence of a non-Newtonian viscosity-providing agent and a defined viscosity, being support by the passage on page 24.

The claims now recite, *inter alia*, a defined amount of N-polyoxyalkylene-polyalkylenepolyamine having a defined molecular weight. In this latter regard, applicants note that when the molecular weight is too low, the alkylene oxide chain is short and the swelling effect on paper is small so that writing feel is not improved and the quality of the ballpoint pen is inferior. To place this into perspective, the Examiner's attention is directed to Examples 1-4 of the present application which use nonionic high molecular surfactants according to the invention defined in the claims and provide advantageous results including good writing feeling, as may be seen from the results provided in Table 1 on page 43. In contrast, when the surfactant is replaced with a different material as in Comparative Examples 1-4, substantially inferior results are obtained.

In view of the claims now of record and with a full appreciation of the advantageous results which can be obtained, applicants respectfully submit that the

cited prior art does not individually disclose or collectively suggest the present invention. As explained during the course of prosecution, Bui et al., U.S. Patent No. 5,554,212, does not relate to writing instruments, particularly the claimed ballpoint pen. Instead, the patent relates to a water-fast high gloss hyperthermogelling aqueous phase change ink that is designed for an ink jet printer. The ink is specifically composed to gel when its temperature is increased to its thermo-inversion point or when the concentration of the hyperthermogelling component is increased by evaporation or substrate absorption of water from the ink. In order to achieve the hyperthermogelling activity, a hyperthermogelling component is used which is a nonionic surfactant, such as an ethylene oxide propylene oxide block copolymer surfactant.

In relying on Bui et al., the Examiner referred to TETRONIC 1307 which has a molecular weight to 17,000 and PLURONIC surfactants. In view of the amendments to the claims, the PLURONIC surfactants are chemically distinct and the noted TETRONIC 1307 has a molecular weight below that claimed. Furthermore, since Bui et al. only relates to ink for an ink jet printer, the patent does not teach that by using the claimed compound, one can improve writing characteristics such as writing feel, which is irrelevant for an ink jet printer.

Murakami et al., U.S. Patent No. 4,793,860, does not remedy the deficiencies of Bui et al. and cannot be properly combined therewith. Murakami et al. relates to an aqueous ink composition comprising a dye, a polyhydric alcohol and water which can be used as an ink for writing instruments, such as a ballpoint pen, marker, fountain pen or for a recording apparatus including a pen blotter and an ink-jet printer. In the passage beginning at column 9, line 54, the patent further indicates

that various additives, such as a water-soluble preservative, an anti-mold agent, a surfactant, and a pH adjusting agent can be added.

Absent an improper resort to applicants' own specification, applicants again maintain that those of ordinary skill in the art would not attempt to combine the teachings of Bui et al. and Murakami et al. in the manner suggested in the Official Action. Bui et al. specifically provides an ink for ink jet printing and uses a nonionic surfactant as a hyperthermogelling component which has a utility that is specifically designed for ink jet printing. On the other hand, Murakami et al. does not specifically teach a nonionic high molecular surfactant as defined in the claims of record and clearly does not recognize the advantages which can be obtained therefrom in the context of a ballpoint pen as demonstrated in the evidence which has been provided in the specification. Thus, just because Murakami et al. indicates that the disclosed ink composition can be used for various purposes, does not mean that those of ordinary skill in the art would use a thermogelling aqueous phase change ink of Bui et al. that is designed for an ink jet printer, in a writing instrument. Therefore, it is without question that based on the claims and evidence of record, the combination of Bui et al. and Murakami et al. cannot be properly relied on to reject the presently claimed invention.

Even if there existed some valid reason for combining the disparate teachings of Bui et al. and Murakami et al., one would at best be led to using TETRONIC 1307 or a PLURONIC material which do not meet the claimed compound. Furthermore, there would be absolutely nothing in the combination of patents which would lead to a recognition that by following the teachings of the present invention, one could obtain a ballpoint pen with advantageous properties including good writing feel. Moreover, the combination would certainly not lead to new claim 34 which further

recites the presence of a non-Newtonian viscosity-providing agent. Accordingly, the hypothetical combination of Bui et al. and Murakami et al. cannot be used to reject any of the claims now of record.

With respect to the rejection based on the combination of Nakanishi et al., U.S. Patent No. 5,412,021, and Yamamoto et al., U.S. Patent No. 5,203,913, applicants respectfully submit that the rejection is no longer applicable. The Examiner relied on the teaching of PLURONIC materials in the first of these patents as part of the basis for rejecting the claims. As explained above, PLURONIC materials are chemically distinct from the N-polyoxyalkylene-polyalkylenepolyamine having a defined molecular weight recited in the claims of record. Therefore, while applicants do not concede the propriety of the proposed combination of patents, applicants maintain that even if the combination is proper, it would still not lead those of ordinary skill in the art to the claimed invention, and certainly not to an appreciation of the demonstrated advantages which can be obtained therefrom.


For all of the reasons set forth above, applicants respectfully request reconsideration and allowance of the present application.

Should the Examiner have any questions concerning the subject application, the Examiner is invited to contact the undersigned attorney at the number provided below.

Respectfully submitted,

BUCHANAN INGERSOLL PC
(INCLUDING ATTORNEYS FROM BURNS, DOANE, SWECKER & MATHIS)

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By: 
Robert G. Mukai
Registration No. 28,531

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620